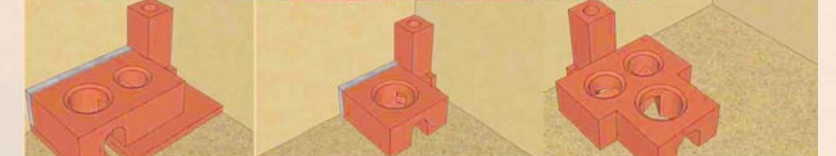




Biomass Energy Sub-Component (BESC) 2012-2017



- been installed.
- Institutional thermal gasifiers are disseminated for drying purpose of agro-products.
- Biomass gasifier electrification system has been piloted at Dang, Rautahat and Sarlahi districts.
- More than 8000 promoters/stove masters have been trained to promote mud ICS.
- Two scientific studies have been completed to record on indoor air pollution (IAP) measurement study in its working areas.
- Biomass Cookstove Testing Laboratory at Renewable Energy Test Station (RETS) has been established.

- District Development Committee (DDC) led BESC Implementation modality in place imparting more ownership and responsibility to DDCs.
- Design and installation of Large Scale Institutional Cooking stove completed.

Implementation modality of BESC:

At central level, AEPC as the main executing agency provides technical support in terms of resources, knowledge and policy support.

At regional level, Regional Service Centres (RSCs) serve as technical support providers for the DDCs, the main implementing agency for effective implementation of program activities. DDC selects one district level service provider from among district based NGOs/cooperatives/private companies called as 'District Service Centre (DSC)' for implementation of planned activities.

DSC's main role, among others, will be formation of 'Business Groups' consisting of individual 'Stove Masters' from different program VDCs. These 'Stove Masters' are expected to function in the form of self-help entrepreneurial groups called 'Business Groups' and deliver required products and services to users' end and are paid from users, as there is no provision of direct subsidy at users' end for mud-brick ICS (Renewable Energy Subsidy Policy 2013).



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Large Scale Institutional Cookstove at Pashupatinagar Ilam



Overview of Biomass Energy Sub-Component (BESC)

The Government of Nepal (GoN) established the Alternative Energy Promotion Centre (AEPC) in November 1996. The Centre was established to develop and promote Alternative/Renewable Energy Technologies (RETs) with particular focus on rural areas of Nepal. From July 2012, AEPC started a five year National Rural and Renewable Energy Programme (NRREP), under a single-programme framework for energy related activities in Nepal. Biomass Energy Sub Component (BESC) is one of the components of AEPC/NRREP, which aims to improve living standards of rural people, increase employment through introduction of affordable, efficient and appropriate biomass energy technologies.

BESC has been developing and disseminating different types of Mud and Metallic Improved Cooking Stoves (ICS) depending upon the requirement of communities of different regions of the country. It has been significantly contributing towards reducing Indoor Air Pollution (IAP), firewood consumption and cooking time thereby improving the health of women and children. In addition to disseminating various ICS for the purpose of households, cattle, commercial and institutional use, BESC is also promoting other new and improved biomass energy technologies such as bio-briquettes, pellets and biomass gasification technologies for thermal applications and rural electrifications.

BESC aims to address issues related to policy formulation and implementation, lobbying for policy implementation through

coordination among national institutions and programmes and institutional capacity building of the sector through awareness raising and human resources development. The appropriate strategies and approaches of this component are aimed at developing policies and institutions, supporting energy provision improvements in the rural areas that eventually increase access to efficient and environment-friendly rural energy solutions, which address social justice and environmental sustainability.

Major Objectives

- To put in place a scaled-up implementation network for ICS, tested and certified stoves with defined quality criteria.
- To make new technologies such as enterprise scale wood gasifiers and bio-briquetting ready and field tested.

The first objective will result in implementation of better options of biomass cooking stove technologies to reach to the poorest of the poor, women and ethnic minorities to help improve their nutritional level, reduce indoor air pollution thereby improving the health of women and children, reducing firewood consumption, reducing Carbon dioxide emission and firewood collection time contributing to drudgery reduction of women.

The second objective of BESC intends to promote biomass densification technologies and to conduct pilot projects on the biomass gasifier based technologies for thermal application for process heating activities at micro, small and

medium scale enterprises as well as electricity generation for community electrification and/or end use application.

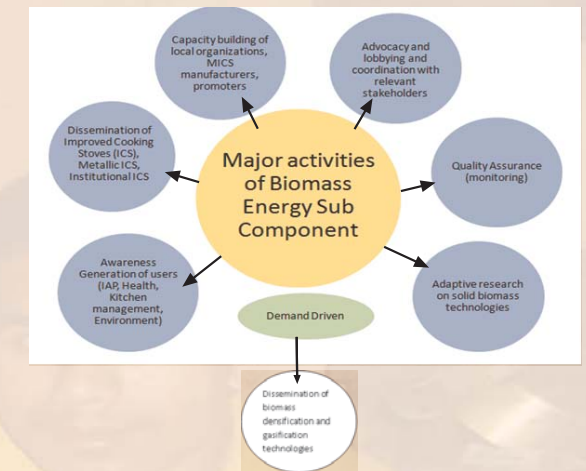
BESC plans to promote these technologies through successful piloting at strategic locations for electrifying rural community where possibility of national grid extension is very minimal for some years to come and installation of micro hydro and solar technologies are either technically or financially not viable.

The programme engages a number of organisations to provide biomass energy technology support services and at the same time will effectively address gender and poverty issues through increased socio-economic activities and employment opportunities.

Scope of Biomass Energy Sub-Component

Biomass Energy Sub-Component has widened its scope to promote new forms of biomass energy technologies such as biomass densification technology and solid biomass gasification technologies.

The biomass densification technologies include production of charred and non-charred briquettes of various shape and sizes. The charred briquettes and low pressure densified briquettes are targeted for dissemination among the rural people and communities for its production at local level using local biomass resources such as loose biomass from forest waste and agricultural residues. These briquettes are used as an alternative fuel for household cooking and room heating. The high pressure non-charred



briquetting technologies are targeted for mass scale production by private entrepreneurs and to be used in replacement of the imported fuels like coal and petroleum products used in furnaces, boilers and other heating and processing industries.

BESC has targeted to pilot biomass gasification technologies for thermal application as well as electrical power generation. The thermal gasification units are targeted for dissemination among the micro, small and medium scale enterprises for replacing the traditional and unsustainable use of fire wood for large scale cooking, heating, drying, food processing etc.

Key Achievements

- Till 20th November 2015, in total 1,239,916 ICS and 21,178 Metallic ICS have been installed.
- More than 1500 Institutional/commercial ICS have